Abstract

Units of traffic are routed between nodes in a network on corresponding sets of trunks, such that the traffic is balanced between disjoint paths. A restoration process for the traffic is implemented using service layer or transport layer switching. In a first embodiment, first and second nodes are connected by first and second sets of trunks, with each of the trunks in a given set of trunks supporting a designated portion of a given one of the units of traffic. The units of traffic are then routed such that a first half of a given one of the units of traffic is routed on a first one of the trunks in a given one of the sets of trunks, and a second half of the given unit is routed on a second one of the trunks in the given set of trunks. In other embodiments, the first and second nodes are connected by first and second sets of trunks so as to form a four-trunk ring, with each of the first and second sets of trunks including a primary trunk and a backup trunk. A given one of the units of traffic is then routed on either an upper or lower portion of the ring. The four trunk ring may be in the form of an IP/optical hybrid ring, in which case the restoration process is implemented using service layer switching, or a SONET/optical ring, in which case the restoration process is implemented using transport layer switching.